REMARKS/ARGUMENTS

Claims 1-23 were pending as of the date of the current office action. Claims 1 and 11 have been amended.

Claims 1-8, 11-18, and 21-23 stand rejected under 35 U.S.C. §102(a) as being anticipated by U.S. Patent No. 5,230,039 to Grossman et al. (hereinafter "Grossman").

Claims 9-10 and 19-20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Grossman in view of U.S. Patent No. 6,057,852 to Krech (hereinafter "Krech").

Applicants respectfully traverse the grounds for rejection and request reconsideration and withdrawal of the rejections of claims 1-23 in view of the following remarks.

Rejections under 35 U.S.C. § 102(a)

Independent claims 1, 2, 11, 12, 21, 22, and 23 recite features that are neither disclosed nor suggested by the cited reference. For anticipation under 35 U.S.C. §102, the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present. As discussed below, the cited reference (Grossman) neither expressly nor inherently teaches the features of the claimed invention.[1]

While the examiner has cited Grossman and described general teachings of Grossman, the Office Action fails to address each of the required claim elements with respect to Grossman. If the Examiner maintains the rejection of the claims in view of Grossman, Applicants respectfully request that the Examiner provide a direct reference to Grossman with respect to each of the Applicants' claim elements.

Claim 1 includes the step of using recalled addresses to retrieve data from within one set of graphics memory storage elements to another set of graphics memory storage elements, where both sets of graphics memory storage elements include a plurality of channels dedicated for data storage. This step is not found in Grossman. While Grossman does discuss image planes and texture planes as data stored in sets of graphics memory storage elements with multiple channels (Grossman, col. 6, lns. 20-28 and 50-59), there is no teaching or suggestion of data from image planes being copied to texture planes, or vice versa. Claims 2, 11, 12, 21, 22, and 23 include similar features.

[1] Additionally, Grossman does not motivate any modification of its teaching to yield these features, and so a §103 obviousness rejection would also be inapposite.

Furthermore, claims 1, 2, 11, 12, and 23 include the features of determining a set of specific data needed for said at least one SIMD instruction which is neither disclosed nor suggested by Grossman. Although Grossman (col. 4, lines 2-5, 32-38 as cited by the examiner) does discuss a Geometry Engine which is SIMD-organized, Grossman does not disclose the steps in claim 1 of:

(c) determining a set of specific data needed for said at least one SIMD instruction;
(d) recalling each said identified address for each graphics memory storage element where said specific data is stored; and
(e) using said recalled addresses to retrieve said specific data into another set of graphics memory storage elements wherein one or more of a plurality of channels have been dedicated for data storage.

Rather, the Geometry Engine "processes a stream of high-level graphics commands mixed with single-precision, floating point data." Other than an indication that the data is streamed, no indication in Grossman exists of the reading of the data to be used for SIMD instructions into a set of graphics memory storage elements. Furthermore, no use or retrieval of data stored in graphics memory storage elements for the SIMD instructions is disclosed or suggested, as required by claims 1, 2, 11, 12, and 23. In fact, Grossman discloses that the end product of the Geometry Engine is vertex information, which is only reduced to individual pixels by the Scan Conversion Subsystem. (Col. 4, ln. 41 – col. 5, ln. 2; col. 5, lns. 5-13). There is no teaching or suggestion of vertex information being stored in a set of graphics memory storage elements wherein one or more of a plurality of channels have been dedicated for data storage, as is required by claims 1, 2, 11, 12, and 23. At least in part due to similar limitations in claims 2, 11, 12, 21, 22 and 23, these claims are not anticipated by Grossman.

Based on the foregoing, claims 1, 2, 11, 12, and 23 and all claims dependent from those claims should not be rejected as being anticipated by Grossman. Therefore, withdrawal of the rejection of claims 1-8, 11-18, and 21-23 under 35 U.S.C. §102(a) is respectfully requested.

Claim Rejections under 35 U.S.C. §103

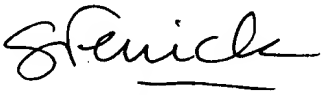
Claims 9-10 and 19-20 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Grossman in view of Krech. It is respectfully submitted that claims 9-10 and 19-20 are allowable over the art of record for the reasons set forth below.

Claims 9 and 10 are dependent on claim 2, and claims 19 and 20 are dependent on claim 12. Krech does not cure the deficincies of the Grossman partent. Krech merely discloses a graphics application programming interface and OpenGL. Therefore, the elements of claims 9-10 and 19-20 are not disclosed by either Grossman or Krech, taken alone or in combination. Withdrawal of the rejection of claims 9, 10, 19, and 20 under 35 U.S.C. § 103(a) is therefore respectfully requested.

CONCLUSION

For all the foregoing reasons, Applicants respectfully submit that the present application is now in condition for allowance. Reconsideration of the office action and an early notice of allowance are respectfully requested. In the event that the examiner cannot allow the present application for any reason, the examiner is encouraged to contact the undersigned attorney, Sharon Fenick at (215) 568-3100, to discuss resolution of any remaining issues.

Date: June 11, 2003



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